

Statement of Basis

for the DRAFT CAAPP Permit for:

Source Name:

Advance Disposal Services Valley View Landfill, Inc.

Statement of Basis No.: 99040004-04-2014

I.D. No.: 115802AAL

Permit No.: 99040004

Date Prepared: April 2, 2014

Permitting Authority:

Illinois Environmental Protection Agency
Bureau of Air, Permit Section
217/785-1705

This Statement of Basis is being provided to USEPA and any interested parties as required by Section 39.5(8)(b) of the Illinois Environmental Protection Act.

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PREFACE

Purpose Of This Document

This document is a requirement of the permitting authority in accordance with 502(a) of the Clean Air Act, 40 CFR 70.7(a)(5), and Section 39.5(8)(b) of the Illinois Environmental Protection Act (Act). Pursuant to Section 39.5(8)(b) of the Act, the Illinois Environmental Protection Agency (EPA) has prepared this Statement of Basis in order to provide the permitting authority, the public, the source, and the USEPA with " the legal and factual basis for the Draft CAAPP permit conditions, including references to the applicable statutory or regulatory provisions." To that end, this document indicates how the Draft CAAPP Permit was developed and how the various applicability and technical matters that form the basis of the Draft CAAPP Permit were applied.

Summary Of Historical Actions Leading Up To Today's Permitting Action

Since the last New CAAPP Permit issued on October 22, 2004, the source has also been issued the following:

March 11, 2003: Name Change to Onyx Valley View Landfill
November 6, 2006: Name Change to Veolia ES Valley View Landfill, Inc.

Limitations

This Statement of Basis is not enforceable and only sets forth the legal and factual basis for the Draft CAAPP Permit Conditions (Chapters I and II). Chapter III contains supplemental material that would assist in educating interested parties about this source and the Draft CAAPP Permit. The Statement of Basis does not shield the source from enforcement actions or its responsibility to comply with existing or future applicable regulations. Nor does the Statement of Basis constitute a defense to a violation of the Federal Clean Air Act or the Illinois Environmental Protection Act including implementing regulations.

This document does not purport to establish policy or guidance.

INTRODUCTION

The Clean Air Act Permit Program (CAAPP) is the operating permit program established in Illinois for major stationary sources as required by Title V of the federal Clean Air Act and Section 39.5 of the Illinois Environmental Protection Act. The Title V Permit Program (CAAPP) is the primary mechanism to apply the various air pollution control requirements established by the Clean Air Act to major sources, defined in accordance with Title V of the Clean Air Act. The Draft CAAPP Permit contains conditions identifying the state and federal applicable requirements that apply to the source. The Draft CAAPP Permit also establishes the necessary monitoring and compliance demonstrations. The source must implement this monitoring to demonstrate that the source is operating in accordance with the applicable requirements of the permit. The Draft CAAPP Permit identifies all applicable requirements for the various emission units as well as establishes detailed provisions for testing, monitoring, recordkeeping, and reporting to demonstrate compliance with the Clean Air Act. Further explanations of the specific provisions of the Draft CAAPP Permit are contained in the following Chapters of this Statement of Basis.

In addition, the Illinois EPA has committed substantial resources and effort in the development of an acceptable Statement of Basis (this document) that would meet the expectations of USEPA, Region 5. As a result, this document contains discussions that address applicability determinations, periodic monitoring, streamlining, prompt reporting, and SSM authorizations (as necessary). These discussions involve, where necessary, a brief description and justification for the resulting conditions and terms in this Draft CAAPP Permit. This document begins by discussing the legal basis for the contents of the Draft CAAPP Permit, moves into the factual description of the permit, and ends with supplemental information that has been provided to further assist with the understanding of the background and genesis of the permit content.

It is Illinois EPA's preliminary determination that this source's Permit Application meets the standards for issuance of a "Final" CAAPP Permit as stipulated in Section 39.5(10)(a) of the Illinois Environmental Protection Act (see Chapter I - Section 1.2 of this document).

The Illinois EPA is therefore initiating the necessary procedural requirements to issue a Final CAAPP Permit. The Illinois EPA has posted the Draft CAAPP permit and this Statement of Basis on USEPA website:

<http://www.epa.gov/reg5oair/permits/ilonline.html>

CHAPTER I – LEGAL BASIS FOR THE PERMIT AND PERMIT CONDITIONS

1.1 Legal Basis for Program

The Illinois EPA's state operating permit program for major sources established to meet the requirements of 40 CFR Part 70 are found at Section 39.5 of the Illinois Environmental Protection Act [415 ILCS 5/39.5]. The program is called the Clean Air Act Permitting Program (CAAPP). The underlying statutory authority is found in the Illinois Environmental Protection Act at 415 ILCS 5/39.5. The CAAPP was given final full approval by USEPA on December 4, 2001 (see 66 FR 62946).

1.2 Legal Basis for Issuance of CAAPP Permit

In accordance with Section 39.5(10)(a) of the Illinois Environmental Protection Act, the Illinois EPA may only issue a CAAPP Permit if all of the following standards for issuance have been met:

- The applicant has submitted a complete and certified application for a permit, permit modification, or permit renewal consistent with Sections 39.5(5) and (14) of the Illinois Environmental Protection Act, as applicable, and applicable regulations (Section a. below);
- The applicant has submitted with its complete application an approvable compliance plan, including a schedule for achieving compliance, consistent with Section 39.5(5) of the Illinois Environmental Protection Act and applicable regulations (Section b. below);
- The applicant has timely paid the fees required pursuant to Section 39.5(18) of the Illinois Environmental Protection Act and applicable regulations (Section c. below); and
- The applicant has provided any additional information as requested by the Illinois EPA (Section d. below).

a. Application Status

The source submitted an application for a Renewal CAAPP Permit on September 13, 2006. The source is currently operating under an application shield resultant from a timely and complete renewal application submittal. This Draft CAAPP Permit addresses application content and necessary revisions to meet the requirements for issuance of the permit.

b. Present Compliance Status

At the time of this Draft CAAPP Permit, there were no pending State or Federal enforcement actions against the source; therefore, a Compliance Schedule is not required for this source. The source submitted an approvable Compliance Plan as part of its Certified Permit Application. The source has certified compliance with all applicable rules and regulations. In addition, the draft permit requires the source to certify its compliance status on an annual basis.

c. Payment of Fees

The source is current on payment of all fees associated with operation of the emission units.

d. Additional Information

The source provided all the necessary additional application material as requested by the Illinois EPA.

1.3 Legal Basis for Conditions in the CAAPP Permit

This industrial source is subject to a variety of federal and SIP regulations, which are the legal basis for the conditions in this permit (see Sections a. and b. below). Also, the CAAPP provides the legal basis for additional requirements such as periodic monitoring, reporting, and recordkeeping. The following list summarizes those regulations that form the legal basis for the conditions in this Draft CAAPP Permit and are provided in the permit itself as the origin and authority.

This industrial source is subject to a variety of Federal and SIP regulations, which are the legal basis for the conditions in this permit. Also, the CAAPP provides the legal basis for additional requirements such as periodic monitoring, reporting, and recordkeeping. The following list summarizes those regulations that form the legal basis for the conditions in this Draft Permit and are provided in the permit itself as the origin and authority.

a. Applicable Federal Regulations

This source operates emission units that are subject to the following Federal regulations.

40 CFR Part 60 - Subpart A	NSPS General Provisions
40 CFR Part 60 - Subpart WWW	Standards of Performance for Municipal Solid Waste Landfills
40 CFR Part 61 - Subpart M	National Emission Standard for Asbestos
40 CFR Part 63 - Subpart A	NESHAP General Provisions
40 CFR Part 63 - Subpart AAAAA	NESHAP: Municipal Solid Waste Landfills
40 CFR Part 82- Subpart F	Ozone Depleting Substances

b. Applicable SIP Regulations

This source operates emission units that are subject to the following SIP regulations:

35 IAC Part 201 - Permits And General Provisions
35 IAC Part 212 - Visible And Particulate Matter Emissions
35 IAC Part 214 - Sulfur Limitations
35 IAC Part 254 - Annual Emissions Report

CHAPTER II – FACTUAL BASIS FOR THE PERMIT AND PERMIT CONDITIONS

2.1 Source History

There is no significant source history warranting discussion for this source.

2.2 Description of Source

SIC Code: 4953
County: Macon

The source is a municipal solid waste landfill. The landfill consists of two units that opened as follows: Unit 1 – 1965 and Unit 2 – 1976. As each unit or section within a unit is filled, waste operations cease, a final cover is installed, and the unit/section undergoes closure as per the regulations administered by IEPA- Bureau of Land.

A MSW landfill is defined as an entire disposal facility in a contiguous geographical space where household waste is placed in or on land. An MSW landfill may also receive other types of RCRA Subtitle D wastes (40 CFR 257.2) such as commercial solid waste, nonhazardous sludge, conditionally exempt small quantity generator waste, and industrial solid waste. An open flare is used as the primary control device for landfill gas emissions. Fugitive particulate matter emissions are generated from the landfill haul roads and other operations.

The source contains the following processes:

<i>Emission Units</i>	<i>Pollutants Being Regulated</i>	<i>Original Construction Date</i>
MSW landfill with an open flare		
Section I (Unit 1) (Closed)	Opacity, NO _x , CO, SO ₂ , PM/PM ₁₀ , VOM/NMOC, HAPs, GHGs and Asbestos	1965
Section II (Unit 2)		1976
Section II (Unit 2)		1978
Section IV (Unit 2)		1995
Section V (Unit 2)		2013

2.3 Single Source Status

This source does not have any collocated facilities that would be considered a single source with this facility based on information found in the certified application.

2.4 Ambient Air Quality Status for the Area

The source is located in an area that as of the date of permit issuance designated attainment or unclassifiable for the National Ambient Air Quality Standards for all criteria pollutants (carbon monoxide, lead, nitrogen dioxide, ozone, PM_{2.5}, PM₁₀, sulfur dioxide). (See 40 CFR Part 81 – Designation of Areas for Air Quality Planning Purposes)

2.5 Source Status

The source requires a CAAPP permit because this source is considered major (based on its PTE) for the following regulated pollutants: nitrogen oxides (NO_x), carbon monoxide (CO), and/or sulfur dioxide (SO₂).

The source also requires a CAAPP Permit because the source is subject to 40 CFR Part 60 – Subpart WWW – Standards of Performance for Municipal Solid Waste Landfills.

This source maintains synthetic minor limits (see Condition(s) 4.1.4(a)) for the following regulated pollutants: nitrogen oxides (NO_x), carbon monoxide (CO), sulfur dioxide (SO₂), GHG and/or hazardous air pollutant (HAP).

This source is considered a natural minor for the following regulated pollutants: PM₁₀, PM_{2.5}, nitrogen oxides (NO_x), volatile organic material (VOM), and/or hazardous air pollutant (HAP).

This source is not currently subject to any “applicable requirements,” as defined by Section 39.5(1) of the Act, for emissions of greenhouse gases (GHG) as defined by 40 CFR 86.1818–12(a), as referenced by 40 CFR 52.21(b)(49)(i). There are no GHG-related requirements under the Illinois Environmental Protection Act, Illinois’ State Implementation Plan, or the Clean Air Act that apply to this facility, including terms or conditions in a Construction Permit addressing emissions of GHG or BACT for emissions of GHG from a major project at this facility under the PSD rules. In particular, the USEPA’s Mandatory Reporting Rule for GHG emissions, 40 CFR Part 98, does not constitute an “applicable requirement” because it was adopted under the authority of Sections 114(a)(1) and 208 of the Clean Air Act. This permit also does not relieve the Permittee from the legal obligation to comply with the relevant provisions of the Mandatory Reporting Rule for this facility.

2.6 Annual Emissions

The following table lists annual emissions (tons) of criteria pollutants for this source, as reported in the Annual Emission Reports (AER) sent to the Illinois EPA:

<i>Pollutant</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>	<i>2011</i>	<i>2012</i>
CO	36.630	38.7800	37.130	52.990	46.400
NO _x	6.730	7.130	6.820	9.740	8.5300
PM	5.440	5.060	10.750	11.440	12.800
SO ₂	2.200	2.500	2.400	3.100	4.100
VOM	4.630	4.720	4.670	2.000	1.460
CO ₂ e	---	---	33,443.450	73186.620	64944.300
HAP (-)	---	---	---	---	---

2.7 Fee Schedule

The following table lists the approved annual fee schedule (tons) submitted in the Source’s permit application:

<i>Pollutant</i>	<i>Tons/Year</i>
Volatile Organic Material (VOM)	31.53
Sulfur Dioxide (SO ₂)	65.70

<i>Pollutant</i>	<i>Tons/Year</i>
Particulate Matter (PM)	59.50
Nitrogen Oxides (NO _x)	24.50
HAP, not included in VOM or (HAP)	6.20
Total	187.43

2.8 **SIP Permit Facts (T1 Limits)**

CAAPP Permits must address all “applicable requirements,” which includes the terms and conditions of preconstruction permits issued under regulations approved by USEPA in accordance with Title I of the CAA (See definition of applicable requirements in Section 39.5(1) of the Illinois Environmental Protection Act). Preconstruction permits, commonly referred to in Illinois as Construction Permits, derive from the New Source Review (“NSR”) permit programs required by Title I of the CAA. These programs include the two major NSR permit programs: (1) the Prevention of Significant Deterioration (“PSD”) program¹ and (2) the nonattainment NSR program.² These programs also encompass state construction permit programs for projects that are not major.

In the CAAPP or Illinois’s Title V permit program, the Illinois EPA’s practice is to identify requirements that are carried over from an earlier Title I permit into a New or Renewed CAAPP Permit as “TI” conditions (i.e., Title I conditions). Title I Conditions that are revised as part of their incorporation into a CAAPP Permit are further designated as “TIR”. Title I Conditions that are newly established through a CAAPP Permit are designated as “TIN”. It is important that Title I Conditions be identified in a CAAPP Permit because these conditions will not expire when the CAAPP Permit expires. Because the underlying authority for Title I Conditions comes from Title I of the CAA and their initial establishment in Title I Permits, the effectiveness of T1 Conditions derives from Title I of the CAA rather than being linked to Title V of the A. For “changes” to be made to Title I Conditions, they must either cease to be applicable based on obvious circumstances, e.g., the subject emission unit is permanently shut down, or appropriate Title I procedures must be followed to change the conditions.

- There are no previously issued Construction Permits required to be incorporated into the CAAPP Permit.
- Newly Issued Construction Permits:

<i>Permit No.</i>	<i>Date Issued</i>	<i>Subject</i>
11060021	October 7, 2011	Replacement Open Flare
12050056	August 24, 2012	Landfill Expansion

- Extraneous or Obsolete T1 Conditions:³

<i>Construction Permit No.</i>	<i>Condition Number</i>	<i>Subject</i>
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98010044 and 99070092	5.5.3	<p>The referenced condition was shown in the original CAAPP permit and incorporated source wide conditions from the two referenced construction permits for two reciprocating engines operated by KMS Macon Power, Inc. (ID# 115015AOY), an open flare, and the landfill.</p> <p>The limitations are obsolete since KMS Macon Power, Inc. landfill gas to energy facility has closed and been removed; the open flare has been replaced; and the landfill has been expanded (See New Construction Permits referenced above)</p>
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CHAPTER III - SUPPLEMENTAL DISCUSSIONS REGARDING THE PERMIT

The information provided in this Chapter of the Statement of Basis is being provided to assist interested parties in understanding what additional information may have been relied on to support this draft CAAPP permit.

3.1 Environmental Justice Discussions

This location has not been identified as a potential concern for Environmental Justice consideration.

3.2 Emission Testing Results

The source has performed the following open flare performance testing:

stk ID	Source	Source Unit	Permit	Protocol Date	Test Recv'd Date	Status	Action ID
7647	115802AAL	utility (open) flare	11060021	8/7/2013	10/23/2013	Accepted	99999

As indicated in Table 1 of the Performance Test Report, dated October 22, 2013, the flare meets the applicable operational limits in 40 CFR 60.18(c)(3) and (4).

**Table 1
Test Results**

		Test Run Date	1 9/5/2013	2 9/5/2013	3 9/5/2013	
		Time	12:40-1:10	1:13-1:43	1:45:2:15	Average
<u>Parameters Collected in Triplicate</u>		<u>Units</u>				
Flare Tip Area		ft ²	0.785	0.785	0.785	0.785
Volumetric Flow		scfm	1847	1852	1856	1852
Net Heating Value		MJ/scm	11.43	11.51	11.54	11.49
Actual Flare Tip Velocity		m/sec	11.95	11.98	12.01	11.98
Maximum Allowable Velocity		m/sec	18.7	18.7	18.7	18.7
<u>Other Parameters</u>		<u>Units</u>	<u>Result</u>			
Visible Emissions		minutes	None			
NMOC		ppm as hexane	269.7			

Page 2: Average percent methane 33.87%

Page 4: Total reduced sulfur as H₂S = 86 ppm.

3.3 Compliance Reports (Annual Certifications, Semiannual Monitoring, NESHAP, etc.)

A review of the source's compliance reports demonstrates the sources ability to comply with all applicable requirements.

3.4 Field Inspection Results

A review of the source's latest field inspection report dated 02-02-2012 demonstrates the source's ability to comply with all applicable requirements.

3.5 Historical Non-Compliance

There is no historical non-compliance reported for this source.

3.6 Source Wide Justifications and Rationale

Applicable Requirements Summary		
Applicable Requirement	Type	Location
Fugitive Particulate Matter (35 IAC 212.301 and 35 IAC 212.314)	Applicable Standard	See the Permit, Condition 3.1(a)(i)(A)
Operational Requirement - Construction Permit 12050056 [T1] - Fugitive Particulate Matter Control Measures	Work Practice	See the Permit, Condition 3.1(a)(i)(B)
Title I Requirements Construction Permit 11060021 Requirements [T1]	Applicable Limits	See the Permit, Condition 3.3(a)

Fugitive Particulate Matter Emissions

- ✓ Monitoring as follows (Condition 3.1(a)(ii)(A)):
 - o Weekly observations to demonstrate compliance with control measures requirements.
- ✓ Testing as follows (Condition 3.1(a)(ii)(B)):
 - o Observations of fugitive particulate matter emissions required upon Illinois EPA request.
- ✓ Recordkeeping as follows Condition 3.1(a)(ii):
 - o Control Measures Record
 - o Records of observations
- ✓ Reporting as follows (Condition 3.5(a)):
 - o Prompt reporting within 30 days of detecting a deviation;
 - o Submittal of a revised Control Measures Record, for Illinois EPA review, within 60 days after the effectiveness of Condition 3.1(a)(ii)(C)(I); and
 - o Submittal of any subsequent revisions of the Control Measures Record, for Illinois EPA review, within 30 days.

Rationale and Justification for Periodic Monitoring

Periodic Monitoring, at the current level of compliance, is sufficient for this source because:

- Source has not exhibited a history of non-compliance based upon a review of Illinois EPA Field Operation Section (FOS) inspection reports
- Monitoring is consistent with that required for other MSW landfills permitted by Illinois EPA.

Title I Requirements (Construction Permit 11060021)

- ✓ Monitoring as follows (Condition 3.3(a)(ii)(A))
 - o Monitoring procedures as required in Conditions 4.1.2(b)(ii) (Total Reduced Sulfur) and (c)(ii)(C) (NMOC/VOM));
 - o Source-wide emissions by pollutant based upon the sum of emissions from all emission units and operations at the source; and
 - o Emissions shall be determined using appropriate emission factors which in order of preference shall be factors from on-site testing, manufacturer's emission data, and emission factors from USEPA's Compilation of Air Pollutant Emission Factors (AP-42), and continuous operation.
- ✓ Testing as follows (Condition 3.3(a)(ii)(B)):
 - o Testing procedures as required in Conditions 4.1.2(b)(ii)(B)(II) and (c)(ii)
- ✓ Recordkeeping as follows (Condition 3.3(a)(ii)(C)):
 - o Records and documentation of the assumptions and/or factors, and calculations use to demonstrate compliance.
- ✓ Reporting as follows ((Condition 3.5(a)):
 - o Prompt reporting within 30 days of detecting a deviation;

Periodic Monitoring, at the current level of compliance, is sufficient for this source because:

- Source has not exhibited a history of non-compliance based upon a review of Illinois EPA Field Operation Section (FOS) inspection reports
- Monitoring is consistent with that required for other MSW landfills permitted by Illinois EPA.

Non-Applicability Discussion

The following complex non-applicability determinations were made for this source:

- Condition 3.4(e) - Several internal combustion engines at the source were determined to be not subject to the requirements of 40 CFR 63 Subpart ZZZZ, based upon all engines not meeting the applicability criteria in 40 CFR 63.6585(a) and the definition of a *Stationary reciprocating internal combustion engine (RICE)* in 40 CFR 63.6675, i.e., all engines at the source are mobile and meet the definition of a non-road engine as defined in 40 CFR 1068.30. Since applicability under the above is dependent upon a particular engine being stationary, limitations to avoid applicability were included in the permit.

Prompt Reporting Discussion

Prompt reporting of deviations for source wide emission units has been established as 30 days. See rationale in Chapter III Section 3.9.

3.7 Emission Unit Justifications and Rationale

4.1. MSW Landfill		
Applicable Requirements Summary		
Applicable Requirement	Type	Location
Visible Emissions (Opacity) Requirement (35 IAC 212.123(a) and 40 CFR 60.18(c)(1))	Applicable Limit	See the Permit, Condition 4.1.2(a)
SO ₂ Requirement (35 IAC 214.301)	Applicable Limit	See the Permit, Condition 4.1.2(b)(i)(A)
SO ₂ Requirement - T1 (Construction Permit 11060021)	Applicable Limit	See the Permit, Condition 4.1.2(b)(i)(B)
NSPS Requirement (40 CFR 60 Subpart WWW)	Applicable Standard	See the Permit, Condition 4.1.2(c)
HAP Requirements (40 CFR 63 Subpart AAAA)	Applicable Standard	See the Permit, Condition 4.1.2(d)
Asbestos Requirements (40 CFR 61 Subpart M)	Applicable Standard	See the Permit, Condition 4.1.2(e)
Title 1 Requirements - T1 (Construction Permit 11060021) NO _x , CO, PM/PM ₁₀ , VOM/NMOC, & HAPs	Applicable Limit	See the Permit, Condition 4.1.4(a)
Title 1 Requirements - T1 (Construction Permit 12050056) GHG & HAPs s	Applicable Limit	See the Permit, Condition 4.1.4(b)

Visible Emissions (i.e., Opacity)

- ✓ Monitoring as follows (Condition 4.1.2(a)(ii)(A))
 - 30% opacity limitation - 35 IAC 212.123(a)/No visible emissions - 40 CFR 60.18(c)(1): Compliance monitoring for the open flare pursuant to 35 IAC 212.123(a) is subsumed by no visible emissions monitoring for 40 CFR 60.18(c)(1) using USEPA RM 22. In lieu of RM 22, the Permittee may verify compliance using USEPA RM 9 since RM 22 does not quantify opacity;
 - Monitoring the open flare on a monthly basis until at least 4 months of data indicates compliance, thereafter; monitoring may revert to a quarterly basis.
 - Monitoring by a third party is not required unless requested in writing;
 - The Permittee shall either take corrective action within 4 hours of such observation or indicate a deviation within the monitoring record.
 - A deviation shall be recorded in the monitoring record:
 - If an exceedance is observed and corrective action cannot be made within 48 hours;
 - If RM 22 is used to verify compliance, a deviation shall be indicated in the monitoring record if visible emissions are observed for more than a total of 5 minutes during the 2-hour observation period.

- If RM 9 is used to verify compliance, a deviation shall be indicated in the monitoring record if the open flare's average opacity exceeds 30% over the 3 test run monitoring period.
- ✓ Recordkeeping as follows (Condition 4.1.2(a)(ii)(B)):
 - o Field data sheets of observations with notes as to whether the open flare was operating properly and An indication as to whether monitoring is on a monthly or quarterly basis;
 - o Description of any corrective action taken including if the corrective action took place within 4 hours of the observation.
- ✓ Reporting as follows (Condition 4.1.5(a)):
 - o Prompt reporting within 30 days

Rationale and Justification for Periodic Monitoring

Periodic Monitoring, at the current level of compliance, is sufficient for this emission unit because:

- Source has not exhibited a history of non-compliance based upon a review of Illinois EPA FOS inspection reports
- Monitoring is consistent with that required for other MSW landfills permitted by Illinois EPA.
- The zero opacity threshold for the open flare, i.e., no visible emissions, using Method 22, is a substantially narrower compliance threshold compared to the 30 percent opacity limit allowed under 35 IAC 212.123(a).

Sulfur Emissions

- ✓ Monitoring as follows (Condition 4.1.2(b)(ii)(A)-(C))
 - o Volumetric Flow Throughput: gas flow rate measuring device
 - o Annual LFG Chemical and Physical Composition:
 - Total reduced sulfur (TRS) - RM 15/16 or ASTM D5504; and
 - LFG methane; NMOC (pound/cubic foot) and net heat content (Btu/cubic foot) as per RM 3C or ASTM D1946
 - o Annually compliance monitoring using volumetric flow throughput data from the gas collection and control system, i.e., 12 month average LFG volumetric flow throughput (cubic feet per minute) and an analysis of the LFG chemical and physical composition. Worst case emissions are assumed since the dilution effect of other combustion components are not accounted for in the calculations. Where the maximum possible SO₂ concentration and mass (lb/hr and ton/yr) that can be emitted are calculated, assuming stoichiometric combustion, i.e., 0% excess air and 100% conversion of TRS to SO₂.
- ✓ Recordkeeping as follows (Condition 4.1.2(b)(ii)(D)-(E)):
 - o Design specifications for the flare
 - o LFG consumed by the flare, on a daily basis
 - o Maximum hourly emissions of SO₂ with supporting documentation
 - o Monthly and annual emissions of SO₂ from the affected flare (tons/month and tons/year) with supporting calculations
 - o An inspection/maintenance log
 - o Total sulfur content of the LFG and the results of the compliance verification analysis pursuant to Condition 4.1.2(b)(i)(A) and 35

- IAC 214.301 determined in accordance with Condition 4.1.2(b)(ii)(B) compliance with 35 IAC 214.301.
- o Log of sampling and analysis activity
- ✓ Reporting as follows (Condition 4.1.5(a)):
 - o Prompt reporting within 30 days

Rationale and Justification for Periodic Monitoring

Periodic Monitoring, at the current level of compliance, is sufficient for this emission unit because:

- The source has a substantial margin of compliance. Compliance with the hourly and annual emissions limits assures compliance with 35 IAC 214.301. As per the calculations shown in the permit application (See below), the maximum total reduced sulfur concentration (as H₂S) of the LFG must exceed 32183 ppm in order for SO₂ emissions to exceed 2000 ppm with a corresponding mass emission rate of 4225.03 tons/year 962.0 lbs/hour.
- Source has not exhibited a history of non-compliance based upon a review of Illinois EPA FOS inspection reports.
- Monitoring is consistent with that required for other MSW landfills permitted by Illinois EPA.

Example Calculation:

Maximum Gas Flow Rate: 3000 cfm = 180000 scfh

Maximum Operating Hours: 8784 hours

Other Data:

Cs 32183 ppm (Reduced Sulfur Compound Concentration, Engineering Estimate)

385.4 = molar volume at 528°R (68°F) and 1 atm where $V = nRT/P$

$R = 0.730 \text{ ft}^3 \cdot \text{atm} \cdot ^\circ\text{R}^{-1} \cdot \text{lb-mol}^{-1}$

Calculate Emissions for Sulfur Dioxide (SO₂):

$$\frac{32183 \text{ ppm H}_2\text{S}}{1,000,000} \times \frac{64 \text{ mol. Wt. SO}_2}{385.4 \text{ scf/lb-mole}} \times 180,000 \text{ scfh} \times 8784 \frac{\text{hrs}}{\text{yr}} \times \frac{1 \text{ Ton}}{2000 \text{ lbs}} =$$

Maximum SO₂ emission rate = 4225.03 tons/year and 962.0 lbs/hour

Formula:

$\text{SO}_x \text{ (ppm)} = (\text{SO}_x \text{ (lbs/hr)} \times 6.0151 \times 10\text{E}+06) / (\text{Exhaust flow (dscfm)} \times 60 \text{ min/hr})$

Calculations based on the following flare data:

SO_x = 962 lbs/hr (Calculated Hourly Ems Rate)

H₂S = 32183 ppm (backed out of hourly emissions rate)

Exh. Flow = 48219 dscfm (Exhaust flow rate for the open flare was calculated using a mass balance model)

SO_x (ppm) = 2000 ppm

Note: The last stack test, dated October 26, 2013, reported TSR as H₂S as 86 ppm with LFG volumetric flow rate at 111120 scfh which calculates using the example calculation above: SO₂ = 1.60 lb/hr; 6.70 tons/yr; and 1.44 ppm.

Nonmethane Organic Compounds (NMOC) Emissions

- ✓ Monitoring as follows (Condition 4.1.2(c)(ii)(A)-(B))
 - o Compliance with the Gas Collection and Control System (GCCS) design plan requirements, in Conditions 4.1.2(c)(i)(A)(III)-(IV) and 40 CFR 60.752(b)(2)(ii) and (iv), based upon the GCCS being installed and operated pursuant to the approved GCCS design plan, dated December 13, 2012, and any subsequent amendments to the plan;
 - o 40 CFR 60.755(a) and 60.756(a) - Verification that the gas collection system is in compliance with Conditions 4.1.2(c)(i)(A)(III) and 40 CFR 60.752(b)(2)(ii) based upon monitoring specified methods in 40 CFR 60.755(a) and 60.756(a);
 - Monthly well/wellhead pressure, oxygen or nitrogen concentration and temperature monitoring;
 - Continuous monitor the open flare for presence of a pilot light or the flame itself;
 - o 40 CFR 60.755(b) - Verification that the Permittee is in compliance with 40 CFR 60.753(a), based upon placement of each well or design component as specified by the listed date thresholds;
 - o 40 CFR 60.755(c) & (d) and 60.756(f) - Verification the GCCS is compliance with the surface methane operational standard as provided in 40 CFR 60.753(d) based upon quarterly monitoring using the specified instrumentation specifications and procedures for surface emission monitoring devices;
- ✓ Recordkeeping as follows (Condition 4.1.2(c)(ii)(D)):
 - o General Records (Condition 4.1.2(c)(ii)(D)(I))
 - Site-specific NMOC emission rate(s);
 - USEPA and/or Illinois EPA correspondence approving alternatives to the operational standards, test methods, procedures, compliance measures, monitoring, recordkeeping or reporting provisions of 40 CFR 60.753 through 60.758 allowed under 40 CFR 60.752(b)(2)(i)(B);
 - Waste Acceptance
 - Inspection maintenance and repair log for the affected landfill and/or control equipment
 - Landfill gas flow to the control system (Monthly and annual);
 - Operating hours on a monthly basis for the landfill gas open flare
 - o NSPS Records (Condition 4.1.2(c)(ii)(D)(II)-(IX))
 - 40 CFR 60.7(b) - Occurrence and duration of any startup, shutdown, or malfunction;
 - 40 CFR Section 60.7(f) - All measurements, maintenance, reports and records;
 - 40 CFR 60.18(f)(2) - Record of the presence of a flare pilot flame using continuous temperature recorder or logbook;
 - 40 CFR 60.758(a) - Copy of the design capacity report;
 - 40 CFR 60.758(c) - Continuous records of the equipment operating parameters specified to be monitored in 40 CFR 60.756; and

- 40 CFR 60.758(d) - Plot map showing location of each existing and planned collector in the system.
- ✓ Reporting as follows (Condition 4.1.5(a) & (b)):
- o Prompt reporting within 30 days
 - o NSPS Reporting
 - 40 CFR 60.757(a)(3) -If applicable, an amended design capacity report within 90 days of an increase in the maximum design capacity of the landfill;
 - 40 CFR 60.757(d) - closure report within 30 days of waste acceptance cessation;
 - 40 CFR 60.757(e) - Equipment removal report 30 days prior to removal or cessation of operation of the control equipment. and
 - 40 CFR 60.757(f) & 40 CFR 63.1980(a) - semi-annual reports of any exceedances recorded pursuant to the information shown in 40 CFR 60.757(f)(1) through (f).

Rationale and Justification for Periodic Monitoring

Periodic Monitoring, at the current level of compliance, is sufficient for this emission unit because:

- The source is subject to a standard promulgated after Nov. 1990, which Illinois EPA presumes is adequate.
- Source has not exhibited a history of non-compliance based upon a review of Illinois EPA FOS inspection reports.
- Monitoring is consistent with that required for other MSW landfills permitted by Illinois EPA.

HAP Emissions

- ✓ Monitoring as follows (Condition 4.1.2(d)(ii)(A))
- o 40 CFR 63.1960 - Compliance based upon compliance with 40 CFR 60 Subpart WWW, including performance testing, monitoring of the collection system, continuous parameter monitoring, and other credible evidence, See Condition 4.1.2(c). Except that Permittee must have a written SSM plan according to the provisions in 40 CFR 63.6(e)(3).
 - o 40 CFR 63.1965 - deviations defined in 40 CFR 63.1990 to 40 CFR 63 Subpart AAAA
 - Fails to meet any requirement or obligation established by 40 CFR 63 Subpart AAAA, including, but not limited to, any emissions limitation (including any operating limit) or work practice standard;
 - Fails to meet any term or condition that is adopted to implement an applicable requirement in 40 CFR 63 Subpart AAAA and that is included in the operating permit for any affected source required to obtain such a permit; or
 - Fails to meet any emission limitation, (including any operating limit), or work practice standard in 40 CFR 63 Subpart AAAA during SSM, regardless of whether or not such failure is permitted by 40 CFR 63 Subpart AAAA.
 - Landfill monitoring and SSM plan requirements, deviations include the items in 40 CFR 63.1960(a) through (c).

- ✓ Recordkeeping as follows (Condition 4.1.2(d)(ii)(B)) :
 - 40 CFR 63.1980(a) – records as specified in 40 CFR 60 Subpart WWW
 - 40 CFR 63.1980(b) – Records as specified in the general provisions of 40 CFR Part 60 Subpart A and 40 CFR Part 63 as shown in Table 1 of 40 CFR 63 Subpart AAAA. Applicable records in the general provisions include items such as SSM plans.
 - 40 CFR 63.1980(g) – If leachate is applied in a controlled fashion to the waste mass then the owner or operator must keep a record of calculations showing that the percent moisture by weight expected in the waste mass to which liquid is added is less than 40 percent.
- ✓ Reporting as follows (Condition 4.1.5(a) & (b)) :
 - Prompt reporting within 30 days
 - NESHAP Reporting
 - 40 CFR 60.757(f) and 40 CFR 63.1980(a) semi-annual exceedance reports as specified in 40 CFR 60 Subpart WWW; and
 - 40 CFR 63.1980(b) – Reports as specified in the general provisions of 40 CFR Part 60 Subpart A and 40 CFR Part 63 as shown in Table 1 of 40 CFR 63 Subpart AAAA. Applicable records in the general provisions include items such as SSM plans.

Rationale and Justification for Periodic Monitoring

Periodic Monitoring is sufficient for this emission unit because:

- The source is subject to a standard promulgated after Nov. 1990, which Illinois EPA presumes is adequate.
- Source has not exhibited a history of non-compliance based upon a review of Illinois EPA FOS inspection reports.
- Monitoring is consistent with that required for other MSW landfills permitted by Illinois EPA.

Asbestos Emissions

- ✓ Monitoring as follows (Condition 4.1.2(e)(ii)(A))
 - Sections 39.5(7)(b) and (d) of the Act, the monthly inspection on all inactive and active ACWM disposal sites at the source to verify compliance with the visible emissions and/or cover requirements of Condition 4.1.2(f)(i)(A) and 40 CFR 61.151(a) and 61.154(c). Monitor for visible emissions using USEPA RM 22 or take corrective action if ACWM is exposed above ground.
- ✓ Recordkeeping as follows (Condition 4.1.2(e)(ii)(B)) :
 - 40 CFR 61.154(e) – Asbestos-containing waste material received records
 - 40 CFR 61.154(f) Records of the location, depth and area, and quantity in cubic meters (cubic yards) of asbestos-containing waste material within the disposal site on a map or diagram of the disposal area.
 - Records of the inspections and/or corrective actions and data as per RM 22, as applicable.
- ✓ Reporting as follows (Condition 4.1.5(a) & (b)) :
 - Prompt reporting within 30 days

- o NESHAP Reporting
 - 40 CFR 61.151(d) and 61.154(j), the owner or operator shall notify IEPA 45 days prior to excavating or otherwise disturbing any asbestos-containing waste material that has been deposited at a waste disposal site and covered as per 40 CFR 61.151 or 61.154;
 - 40 CFR 61.154(e)(1)(iv) - Report, by the following working day, the presence of a significant amount of improperly enclosed or uncovered waste and/or report immediately, if the discrepancy between the quantity of waste designated on the waste shipment records and the quantity actually received is not resolved within 15 days after receiving the waste; and
 - 40 CFR 61.154(h) - Submit, upon closure of the facility, a copy of records of asbestos waste disposal locations and quantities.

Rationale and Justification for Periodic Monitoring

Periodic Monitoring is sufficient for this emission unit because:

- There is a small likelihood of an exceedance since other permit requirements and/or regulations serve to insure compliance with 40 CFR Part 61 Subpart M.
- Source has not exhibited a history of non-compliance based upon a review of Illinois EPA FOS inspection reports.

Title 1 Requirements

Construction Permit 11060021 [T1]

- ✓ Recordkeeping as follows (Condition 4.1.4(a)):
 - o Design specifications for the open flare
 - o LFG consumed by the flare, on a daily basis
 - o Operating log
 - o Inspection/maintenance log
 - o Maximum hourly emissions of NO_x, CO, PM, VOM, NMOC, and total HAPs
 - o Monthly and annual emissions of NO_x, CO, PM, VOM, NMOC, and total HAPs
- ✓ Reporting as follows (Condition 4.1.5(a)):
 - o Prompt reporting within 30 days

Construction Permit 12050056 [T1]

- ✓ Recordkeeping as follows (Condition 4.1.4(b)):
 - o Total emissions (tons/month and tons/year) of GHG, as CO₂e, excluding biogenic CO₂ from this project, with supporting documentation and calculations.
- ✓ Reporting as follows (Condition 4.1.5(a)):
 - o Prompt reporting within 30 days

Rationale and Justification for Periodic Monitoring

Periodic Monitoring is sufficient for this emission unit because:

- There is a small likelihood of an exceedance (See Example Calculations).

- Source has not exhibited a history of non-compliance based upon a review of Illinois EPA FOS inspection reports.
- Monitoring is consistent with that required for other MSW landfills permitted by Illinois EPA.

Example Calculations (Open flare)

Maximum Hours of Operation = 8784 hr/yr

Q = Maximum Gas Flow Rate: 3000 cfm = 180000 scfh

C_{methane} = Concentration Methane = 0.5 (50%)

Note: Concentration during stack test 33.87% (See Summary in Section 3.2 above.

$$Q_{\text{methane}} = Q * C_{\text{methane}}$$

$$Q_{\text{methane}} = 180000 \text{ scfh} * 0.5 = 90000 \text{ scfh}$$

Flare Emissions

AP-42 - Table 2.4-4 (draft)

Pollutant	Emission Factor (lb/10 ⁶ dscf CH ₄)	Rating
NO _x	39	A
CO	46	A
PM	15	A

Emissions

E_p = Emissions by Pollutant

EF_p = Emission Factor by Pollutant

$$E_p = Q_{\text{methane}} * EF_p$$

Pollutant	lb/hr	Ton/yr
NO _x	3.51	15.41
CO	4.14	18.18
PM	1.35	5.93

Emissions as per Condition 4.4(a)(i)(III)

Pollutant	Limits	
	Lbs/Hour	Tons/Year
NO _x	5.6	24.5
CO	30.3	133.0
PM/PM ₁₀	3.1	13.5

Non-Applicability Discussion

Complex non-applicability determinations were not made for this emission unit. All non-applicability discussions can be found in the Draft CAAPP Permit.

Prompt Reporting Discussion

Prompt reporting of deviations has been established as 30 days. See rationale in Chapter III Section 3.9.

3.8 Insignificant Activities Discussion

There are no insignificant activities for the source subject to specific regulations which are obligated to comply with Sections 9.1(d) and Section 39.5 of the Act; Sections 165, 173, and 502 of the Clean Air Act; or any other applicable permit or registration requirements and therefore there are no periodic monitoring requirements that need to be separately addressed.

3.9 Prompt Reporting Discussion

Among other terms and conditions, CAAPP Permits contain reporting obligations to assure compliance with applicable requirements. These reporting obligations are generally four-fold. More specifically, each CAAPP Permit sets forth any reporting requirements specified by state or federal law or regulation, requires prompt reports of deviations from applicable requirements, requires reports of deviations from required monitoring and requires a report certifying the status of compliance with terms and conditions of the CAAPP Permit over the calendar year.

The number and frequency of reporting obligations in any CAAPP Permit is source-specific. That is, the reporting obligations are directly related to factors, including the number and type of emission units and applicable requirements, the complexity of the source and the compliance status. This four-fold approach to reporting is common to virtually all CAAPP Permits as described below. Moreover, this is the approach established in the Draft CAAPP Permit for this source.

Regulatory Reports

Many state and federal environmental regulations establish reporting obligations. These obligations vary from rule-to-rule and thus from CAAPP source to CAAPP source and from CAAPP Permit to CAAPP Permit. The variation is found in the report triggering events, reporting period, reporting frequency and reporting content. Regardless, the CAAPP makes clear that all reports established under applicable regulations shall be carried forward into the CAAPP Permit as stated in Section 39.5(7)(b) of the Illinois Environmental Protection Act. Generally, where sufficiently detailed to meet the exacting standards of the CAAPP, the regulatory reporting requirements are simply restated in the CAAPP Permit. Depending on the regulatory obligations, these regulatory reports may also constitute a deviation report as described below.

The Draft CAAPP Permit for this source would embody all regulatory reporting as promulgated under federal and state regulations under the Clean Air Act and the Illinois Environmental Protection Act. Depending on the frequency of the report, the regulatory report may also satisfy the prompt reporting obligations discussed below. These reports must be certified by a responsible official.

These reports are generally found in the reporting sections for each emission unit group. The various regulatory reporting requirements are summarized in the table at the end of this Reporting Section.

Deviation Reports (Prompt Reporting)

Section 39.5(7)(f)(ii) of the Illinois Environmental Protection Act mandates that each CAAPP Permit require prompt reporting of deviations from the permit requirements.

Neither the CAAPP nor the federal rules upon which the CAAPP is based and was approved by USEPA define the term "prompt". Rather, 40 CFR Part 70.6(a)(3)(iii)(B) intended that the term have flexibility in application. The USEPA has acknowledged for purposes of administrative efficiency and clarity that the permitting authority (in this case, Illinois EPA) has the discretion to define "prompt" in relation to the degree and type of deviation likely to occur at a particular source. The Illinois EPA follows this approach and defines prompt reporting on a permit-by-permit basis. In instances where the underlying applicable requirement contains "prompt" reporting, the Illinois EPA typically incorporates the pre-established timeframe in the CAAPP permit (e.g. a NESHAP or NSPS deviation report). Where the underlying applicable requirement fails to explicitly set forth the timeframe for reporting deviations, the Illinois EPA generally uses a timeframe of 30 days to define prompt reporting of deviations.

This approach to prompt reporting of deviations as discussed herein is consistent with the requirements of Section 39.5(7)(f)(ii) of the Illinois Environmental Protection Act as well as 40 CFR Part 70 and the CAA. The reporting arrangement is designed so that the source will appropriately notify the Illinois EPA of those events that might warrant attention. The timing for these event-specific notifications is necessary and appropriate as it gives the source enough time to conduct a thorough investigation into the causes of an event, collecting any necessary data, and developing preventive measures, to reduce the likelihood of similar events, all of which must be addressed in the notification for the deviation, while at the same time affording regulatory authority and the public timely and relevant information. The approach also affords the Illinois EPA and USEPA an opportunity to direct investigation and follow-up activities, and to make compliance and enforcement decisions in a timely fashion.

The Draft CAAPP Permit for this source would require prompt reporting as required by the Illinois Environmental Protection Act in the fashion described in this subsection. In addition, pursuant to Section 39.5(7)(f)(i) of the Illinois Environmental Protection Act, this Draft CAAPP Permit would also require the source to provide a summary of all deviations with the Semi-Annual Monitoring Report. These reports must be certified by a responsible official, and are generally found in the reporting sections for each emission unit group.

Semi-Annual Monitoring Reports

Section 39.5(7)(f)(i) of the Illinois Environmental Protection Act mandates that each CAAPP Permit require a report relative to monitoring obligations as set forth in the permit. Depending upon the monitoring obligation at issue, the semi-annual monitoring report may also constitute a deviation report as previously discussed. This monitoring at issue includes instrumental and non-instrumental emissions monitoring, emissions analyses, and emissions testing established by state or federal laws or regulations or as established in the CAAPP Permit. This monitoring also includes recordkeeping. Each deviation from each monitoring requirement must be identified in the relevant semi-annual report. These reports provide a timely opportunity to assess for compliance patterns of concern. The semi-annual reports shall be submitted regardless of any deviation events. Reporting periods for semi-annual monitoring reports are January 1 through June 30 and July 1 through December 31 of each calendar year. Each semi-annual report is due within 30 days after the close of reporting period. The reports shall be certified by a responsible official. The Draft CAAPP Permit for this source would require such reports at Condition 3.5(b).

Annual Compliance Certifications

Section 39.5(7)(p)(v) of the Illinois Environmental Protection Act mandates that each CAAPP Permit require a source to submit a certification of its compliance status with each term and condition of its CAAPP Permit. The reports afford a broad assessment of a CAAPP sources compliance status. The CAAPP requires that this report be submitted, regardless of compliance status, on an annual basis. Each CAAPP Permit requires this annual certification be submitted by May 1 of the year immediately following the calendar year reporting period. The report shall be certified by a responsible official. The Draft CAAPP Permit for this source would require such a report at Condition 2.6(a).

Prompt reporting of deviations is critical in order to have timely notice of deviations and the opportunity to respond, if necessary. The effectiveness of the permit depends upon, among other important elements, timely and accurate reporting. The Illinois EPA, USEPA, and the public rely on timely and accurate reports submitted by the source to measure compliance and to direct investigation and follow-up activities. Prompt reporting is evidence of the source's good faith in disclosing deviations and describing the steps taken to return to compliance and prevent similar incidents.

Any occurrence that results in an excursion from any emission limitation, operating condition, or work practice standard as specified in this Draft CAAPP Permit is a deviation subject to prompt reporting. Additionally, any failure to comply with any permit term or condition is a deviation of that permit term or condition and must be reported to the Illinois EPA as a permit deviation. The deviation may or may not be a violation of an emission limitation or standard. A permit deviation can exist even though other indicators of compliance suggest that no emissions violation or exceedance has occurred. Reporting permit deviations does not necessarily result in enforcement action. The Illinois EPA has the discretion to take enforcement action for permit deviations that may or may not constitute a deviation from an emission limitation or standard or the like, as necessary and appropriate.

As a result, the Illinois EPA's approach to prompt reporting of deviations as discussed herein is consistent with the requirements of Section 39.5(7)(f)(ii) of the Illinois Environmental Protection Act as well as 40 CFR Part 70 and the CAA. This reporting arrangement is designed so that the source will appropriately notify the Illinois EPA of those events that might warrant individual attention.

3.10 Start-up/Shutdown/Malfunction Breakdown Discussion

• Federal Start-up/Shutdown/Malfunction-Breakdown Authorization Discussion

As originally adopted, the General Provisions of the NESHAP, 40 CFR Part 63 Subpart A (40 CFR 63.6(f) and (h)) provided that the limits of the NESHAP generally did not apply during startup, shutdown and malfunction (SSM) events (the "SSM Exemption") unless otherwise provided in a particular subpart for a particular category of source or emissions unit.⁴ However, in December 2008, a US Court of Appeals decision in *Sierra Club v. EPA*, 551 F.3d 1019 (D.C. Cir. 2008), vacated this SSM Exemption.⁵

On July 22, 2009, Adam Kushner, Director of the Office of Civil Enforcement of the USEPA issued guidance identifying the categories of sources that would no

longer be exempt from applicable numerical NESHAP standards during startup, shutdown, and malfunction as a result of the vacatur of the SSM exemption (the SSM Vacatur). This guidance states that the SSM vacatur immediately affects only the NESHAP standards for source categories that both (i) incorporate the SSM Exemption by reference and (ii) contain no other regulatory text that provides an exemption or exception from otherwise applicable limits during startup, shutdown or malfunction events. The NESHAP standards for many source categories contain such separate category-specific exemption language for startup, shutdown and malfunction events. These provisions were not at issue in the *Sierra Club* case and decision, and accordingly those separate provisions would not be affected by the vacatur of the SSM Exemption in 40 CFR 63 Subpart A. The guidance identifies the NESHAP standards for various categories of sources that would be affected by the SSM vacatur and the standards for other categories of sources that would not be affected ("Table 1" and "Table 2," respectively, of the guidance).⁶

3.11 Incorporation by Reference Discussion

Based on guidance found in White Paper 2 and past petition responses by the Administrator, it is recognized that Title V permit authorities may, within their discretion, incorporate plans by reference. As recognized in the *White Paper 2*, permit authorities can effectively streamline the contents of a Title V permit, avoiding the inevitable clutter of restated text and preventing unnecessary delays where, as here, permit issuance is subject to a decision deadline.⁷ However, it is also recognized that the benefits of incorporation of plans must be carefully balanced by a permit authority with its duty to issue permits in a way that is "clear and meaningful" to the Permittee and the public.⁸

The criteria that are mentioned in USEPA Administrator Petition Responses stress the importance of identifying, *with specificity*, the object of the incorporation.⁹ The Illinois EPA agrees that such emphasis is generally consistent with USEPA's pronouncements in previous guidance.

For each condition incorporating a plan, the Illinois EPA is also briefly describing the general manner in which the plan applies to the source. Identifying the nature of the source activity, the regulatory requirements or the nature of the equipment associated with the plan is a recommendation of the *White Paper 2*¹⁰. The Illinois EPA has stopped short of enumerating the actual contents of a plan, as restating them in the permit would plainly defeat the purpose of incorporating the document by reference and be contrary to USEPA guidance on the subject.¹¹

Plans may need to be revised from time to time, as occasionally required by circumstance or by underlying rule or permit requirement. Except where expressly precluded by the relevant rules, this Draft CAAPP Permit allows the Permittee to make future changes to a plan without undergoing formal permit revision procedures. This approach will allow flexibility to make required changes to a plan without separately applying for a revised permit and, similarly, will lessen the impacts that could result for the Illinois EPA if every change to a plan's contents required a permitting transaction.¹² Changes to the incorporated plans during the permit term are automatically incorporated into the Draft CAAPP Permit unless the Illinois EPA expresses a written objection.

The Draft CAAPP Permit incorporates by reference the following plans: Fugitive Particulate Matter Operating Program (Condition 3.2(a) - Construction Permit 12050056 (T1) and GCCS design plan (Condition 4.1.2(e)).¹³

3.12 Periodic Monitoring General Discussions

Pursuant to Section 504(c) of the Clean Air Act, a Title V permit must set forth monitoring requirements, commonly referred to as "Periodic Monitoring," to assure compliance with the terms and conditions of the permit. A general discussion of Periodic Monitoring is provided below. The Periodic Monitoring that is proposed for specific operations and emission units and at this source is discussed in Chapter III of this Statement of Basis. Chapter III provides a narrative discussion of and justification for the elements of Periodic Monitoring that would apply to the different emission units and types of emission units at the facility.

As a general matter, the required content of a CAAPP Permit with respect to such Periodic Monitoring is addressed in Section 39.5(7) of the Illinois Environmental Protection Act.¹⁴ Section 39.5(7)(b) of the Illinois Environmental Protection Act¹⁵ provides that in a CAAPP Permit:

The Agency shall include among such conditions applicable monitoring, reporting, record keeping and compliance certification requirements, as authorized by paragraphs d, e, and f of this subsection, that the Agency deems necessary to assure compliance with the Clean Air Act, the regulations promulgated thereunder, this Act, and applicable Board regulations. When monitoring, reporting, record keeping and compliance certification requirements are specified within the Clean Air Act, regulations promulgated thereunder, this Act, or applicable regulations, such requirements shall be included within the CAAPP Permit.

Section 39.5(7)(d)(ii) of the Illinois Environmental Protection Act further provides that a CAAPP Permit shall:

Where the applicable requirement does not require periodic testing or instrumental or noninstrumental monitoring (which may consist of recordkeeping designed to serve as monitoring), require Periodic Monitoring sufficient to yield reliable data from the relevant time period that is representative of the source's compliance with the permit
...

Accordingly, the scope of the Periodic Monitoring that must be included in a CAAPP Permit is not restricted to monitoring requirements that were adopted through rulemaking or imposed through permitting. When applicable regulatory emission standards and control requirements or limits and control requirement in relevant Title 1 permits are not accompanied by compliance procedures, it is necessary for Monitoring for these standards, requirements or limits to be established in a CAAPP Permit.^{16, 17} Monitoring requirements must also be established when standards and control requirement are accompanied by compliance procedures but those procedures are not adequate to assure compliance with the applicable standards or requirements.^{18, 19} For this purpose, the requirements for Periodic Monitoring in a CAAPP Permit may include requirements for emission testing, emissions monitoring, operational monitoring, non-instrumental monitoring, and recordkeeping for each emission unit or group of similar units at a facility, as required by rule or permit, as appropriate or as needed to assure compliance with the applicable substantive requirements. Various combinations of monitoring measures will be appropriate

for different emission units depending on their circumstances, including the substantive emission standards, limitations and control requirements to which they are subject.

What constitutes sufficient Periodic Monitoring for particular emission units, including the timing or frequency associated with such Monitoring requirements, must be determined by the permitting authority based on its knowledge, experience and judgment.²⁰ For example, as Periodic Monitoring must collect representative data, the timing of Monitoring requirements need not match the averaging time or compliance period of the associated substantive requirements, as set by the relevant regulations and permit provisions. The timing of the various requirements making up the Periodic Monitoring for an emission unit is something that must be considered when those Monitoring requirements are being established. For this purpose, Periodic Monitoring often consists of requirements that apply on a regular basis, such as routine recordkeeping for the operation of control devices or the implementation of the control practices for an emission unit. For certain units, this regular monitoring may entail "continuous" monitoring of emissions, opacity or key operating parameters of a process or its associated control equipment, with direct measurement and automatic recording of the selected parameter(s). As it is infeasible or impractical to require emissions monitoring for most emission units, instrumental monitoring is more commonly conducted for the operating parameters of an emission unit or its associated control equipment. Monitoring for operating parameter(s) serves to confirm proper operation of equipment, consistent with operation to comply with applicable emission standards and limits. In certain cases, an applicable rule may directly specify that a particular level of an operating parameter be maintained, consistent with the manner in which a unit was being operated during emission testing. Periodic Monitoring may also consist of requirements that apply on a periodic basis, such as inspections to verify the proper functioning of an emission unit and its associated controls.

The Periodic Monitoring for an emission unit may also include measures, such as emission testing, that would only be required once or only upon specific request by the Illinois EPA. These requirements would always be accompanied by Monitoring requirements that would apply on a regular basis. When emission testing or other measure is only required upon request by the Illinois EPA, it is included as part of the Periodic Monitoring for an emission unit to facilitate a response by the Illinois EPA to circumstances that were not contemplated when Monitoring was being established, such as the handling of a new material or a new mode of operation. Such Monitoring would also serve to provide further verification of compliance, along with other potentially useful information. As emission testing provides a quantitative determination of compliance, it would also provide a determination of the margin of compliance with the applicable limit(s) and serve to confirm that the Monitoring required for an emission unit on a regular basis is reliable and appropriate. Such testing might also identify specific values of operating parameters of a unit or its associated control equipment that accompany compliance and can be relied upon as part of regular Monitoring.

There are a number of considerations or factors that are or may be relevant when evaluating the need to establish new monitoring requirements as part of the Periodic Monitoring for an emission unit. These factors include: (1) The nature of the emission unit or process and its emissions; (2) The variability in the operation and the emissions of the unit or process over time; (3) The use of add-on air pollution control equipment or other practices to control emissions and comply with the applicable substantive requirement(s); (4) The

nature of that control equipment or those control practices and the potential for variability in their effectiveness; (5) The nature of the applicable substantive requirement(s) for which Periodic Monitoring is needed; (6) The nature of the compliance procedures that specifically accompany the applicable requirements; (7) The type of data that would already be available for the unit; (8) The effort needed to comply with the applicable requirements and the expected margin of compliance; (9) The likelihood of a violation of applicable requirements; (10) The nature of the Periodic Monitoring that may be readily implemented for the emission unit; (11) The extent to which such Periodic Monitoring would directly address the applicable requirements; (12) The nature of Periodic Monitoring commonly required for similar emission units at other facilities and in similar circumstances; (13) The interaction or relationship between the different measures in the Periodic Monitoring for an emission unit; and (14) The feasibility and reasonableness of requiring additional measures in the Periodic Monitoring for an emission unit in light of other relevant considerations.²¹

CHAPTER IV – CHANGES FROM PREVIOUSLY ISSUED CAAPP PERMITS

4.1 Major Changes Summary

This renewal CAAPP draft is presented in a new format. The new format is the result of recommendations by the USEPA, comments made by sources, and interactions with the public.

	<i>Previous CAAPP Permit Layout</i>	<i>New CAAPP Permit Layout</i>
Section 1	Source Identification	Source Information
Section 2	List Of Abbreviations/Acronyms	General Permit Requirements
Section 3	Insignificant Activities	Source Requirements
Section 4	Significant Emission Units	Emission Unit Requirements
Section 5	Overall Source Conditions	Title I Requirements
Section 6	Emission Control Programs	Insignificant Activities
Section 7	Unit Specific Conditions	Other Requirements
Section 8	General Permit Conditions	State Only Requirements
Section 9	Standard Permit Conditions	---
Section 10	Attachments	Attachments

4.2 Specific Permit Condition Changes

The biggest change was the incorporation of the new and removal of obsolete Title 1 limitations as shown in Section 2.8 of the SOB.

- Newly Issued Construction Permits:

<i>Permit No.</i>	<i>Date Issued</i>	<i>Subject</i>
11060021	October 7, 2011	Replacement Open Flare
12050056	August 24, 2012	Landfill Expansion

- Extraneous or Obsolete T1 Conditions:²²

<i>Construction Permit No.</i>	<i>Condition Number</i>	<i>Subject</i>
98010044 and 99070092	5.5.3	<p>The referenced condition was shown in the original CAAPP permit and incorporated source wide conditions from the two referenced construction permits for two reciprocating engines operated by KMS Macon Power, Inc. (ID# 115015AOY), an open flare, and the landfill.</p> <p>The limitations are obsolete since KMS Macon Power, Inc. landfill gas to energy facility has closed and been removed; the open flare has been replaced; and the landfill has been expanded (See New Construction Permits referenced above)</p>

Endnotes

¹ The federal PSD program, 40 CFR 52.21, applies in Illinois. The Illinois EPA administers PSD permitting for major projects in Illinois pursuant to a delegation agreement with USEPA.

² Illinois has a state nonattainment NSR program, pursuant to state rules, Major Stationary Sources Construction and Modification ("MSSCM"), 35 IAC Part 203, which have been approved by USEPA as part of the State Implementation Plan for Illinois.

³ The incorporation, or carry-over, of terms or conditions from previous Title I permits into Title V permits typically does not occur on a wholesale basis. Recognizing that construction permits may frequently contain obsolete or extraneous terms and conditions, USEPA has emphasized that only "environmentally significant terms" from previous preconstruction permits must be carried over into Title V permits. See, White Paper for Streamlined Development of Part 70 Permit Applications, dated July 10, 1995. Therefore, certain T1 terms and conditions have not been carried over from these SIP approved permits for reasons that are explained below.

⁴ During startup, shutdown and malfunction, a source was instead required to minimize emissions of subject emission units in a manner consistent with good air pollution control practice. A startup shutdown and malfunction plan must be maintained by a source setting forth how it operate emission units to minimize emissions during events, ideally so that they are not accompanied by any violations of the applicable standards. Finally, the term "malfunction" is also narrowly defined under the NESHAP. Malfunctions only include events that are sudden, infrequent and not reasonably preventable. Events that are caused, even in part, by poor maintenance or careless operation are not malfunctions for purposes of any SSM exemption.

⁵ The *Sierra Club* decision has created concern for the sources that are subject to NESHAP standards and have relied upon the SSM Exemption. For some source categories, the technological capability to maintain compliance with numerical NESHAP standards during SSM events may not currently exist. Numerical standards were also adopted without critical consideration necessarily having been given to whether those standards could reasonably and appropriately be met during startup, shutdown or malfunction events. Consequently, the vacatur of the SSM Exemption creates uncertainty and concern about how to apply these NESHAP standards pertaining to such events.

⁶ The USEPA guidance contains a caveat. USEPA recognizes that the source category-specific SSM exemption provisions may be challenged separately. As such, the analysis in its guidance could be subject to change. USEPA indicates that it intends to evaluate which source category-specific SSM exemption provisions should be revised. The Illinois EPA is not aware of any such specific challenges that have been made to source category-specific SSM exemption provisions in the NESHAP.

⁷ Among other things, USEPA observed that the stream-lining benefits can consist of "reduced cost and administrative complexity, and continued compliance flexibility...". *White Paper 2*, page 41.

⁸ See, In the Matter of Tesoro Refining and Marketing, Petition No. IX-2004-6, Order Denying in Part and Granting in Part Petition for Objection to Permit, at page 8 (March 15, 2005); see also, White Paper 2 at page 39 ("reference must be detailed enough that the manner in which any referenced materials applies to a facility is clear and is not reasonably subject to misinterpretation").

⁹ The Order provides that permit authorities must ensure the following: "(1) referenced documents be specifically identified; (2) descriptive information such as the title or number of the document and the date of the document be included so that there is no ambiguity as to which version of the document is being referenced; and (3) citations, cross references, and incorporations by reference are detailed enough that the manner in which any referenced material applies to a facility is clear and is not reasonably subject to misinterpretation." See, Petition Response at page 43, citing White Paper 2 at page 37.

¹⁰ See, White Paper 2 at page 39.

¹¹ Nothing in USEPA guidance, including the White Paper 2 or previous orders responding to public petitions, supports the notion that permit authorities incorporating a document by reference must also restate contents of a given plan in the body of the Title V permit. Such an interpretation contradicts USEPA recognition that permit authorities need not restate or recite an incorporated document so long as the document is sufficiently described. White Paper 2 at page 39; see also, In the matter of Consolidated Edison Co. of New York, Inc., 74th St. Station, Petition No. II-2001-02, Order Granting in Part and Denying in Part Petition for Objection to Permit at page 16 (February 19, 2003).

¹² This approach is consistent with USEPA guidance, which has previously embraced a similar approach to certain SSM plans. See, Letter and Enclosures, dated May 20, 1999, from John Seitz, Director of Office of Air Quality Planning and Standards, to Robert Hodanbosi and Charles Lagges, STAPPA/ALAPCO, pages 9-10 of Enclosure B.

¹³ Each incorporated plan addressed by this Section of the Statement of Basis is part of the source's permit file. As such, these plans are available to any person interested in viewing the contents of a given plan may do so at the public repository during the comment period or, alternatively, may request a copy of the same from the Illinois EPA under the Freedom of Information Act. See also 71 FR 20447.

¹⁴ The provisions of the Act for Periodic Monitoring in CAAPP permits reflect parallel requirements in the federal guidelines for State Operating Permit Programs, 40 CFR 70.6(a)(3)(i)(A), (a)(3)(i)(B), and (c)(1).

¹⁵ Section 39.5(7)(p)(i) of the Act also provides that a CAAPP permit shall contain "Compliance certification, testing, monitoring, reporting and record keeping requirements sufficient to assure compliance with the terms and conditions of the permit."

¹⁶ The classic example of regulatory standards for which Periodic Monitoring requirements must be established in a CAAPP permit are state emission standards that pre-date the 1990 Clean Air Act Amendments that were adopted without any associated compliance procedures. Periodic Monitoring must also be established

in a CAAPP permit when standards and limits are accompanied by compliance procedures but those procedures are determined to be inadequate to assure compliance with the applicable standards or limits.

¹⁷ Another example of emission standards for which requirements must be established as part of Periodic Monitoring is certain NSPS standards that require initial performance testing but do not require periodic testing or other measures to address compliance with the applicable limits on a continuing basis.

¹⁸ The need to establish Monitoring requirements as part of Periodic Monitoring when existing compliance procedures are determined to be inadequate, as well as when they are absent, was confirmed by the federal appeals court in *Sierra Club v. Environmental Protection Agency*, 536 F.3d 673, 383 U.S. App. D.C. 109.

¹⁹ The need to establish Monitoring requirements as part of Periodic Monitoring is also confirmed in USEPA's Petition Response. USEPA explains that "...if there is periodic monitoring in the applicable requirements, but that monitoring is not sufficient to assure compliance with permit terms and conditions, permitting authorities must supplement monitoring to assure such compliance." Petition Response, page 6.

²⁰ The test for the adequacy of "Periodic Monitoring" is a context-specific determination, particularly whether the provisions in a Title V permit reasonably address compliance with relevant substantive permit conditions. 40 CFR 70.6(c)(1); see also 40 CFR 70.6(a)(3)(i)(B); see also, *In the Matter of CITGO Refinery and Chemicals Company L.P.*, Petition VI-2007-01 (May 28, 2009); see also, *In the Matter of Waste Management of LA. L.L.C. Woodside Sanitary Landfill & Recycling Center, Walker, Livingston Parish, Louisiana*, Petition VI-2009-01 (May 27, 2010); see also, *In the Matter of Wisconsin Public Service Corporation's JP Pulliam Power Plant*, Petition V-2009-01 (June 28, 2010).

²¹ A number of these factors are specifically listed by USEPA in its Petition Response. USEPA also observes that the specific factors that it identifies in its Petition Response with respect to Periodic Monitoring provide "...the permitting authority with a starting point for its analysis of the adequacy of the monitoring; the permitting authority also may consider other site-specific factors." Petition Response, page 7.

²² The incorporation, or carry-over, of terms or conditions from previous Title I permits into Title V permits typically does not occur on a wholesale basis. Recognizing that construction permits may frequently contain obsolete or extraneous terms and conditions, USEPA has emphasized that only "environmentally significant terms" from previous preconstruction permits must be carried over into Title V permits. See, White Paper for Streamlined Development of Part 70 Permit Applications, dated July 10, 1995. Therefore, certain T1 terms and conditions have not been carried over from these SIP approved permits for reasons that are explained below.